

M-SHARP Capabilities Brief



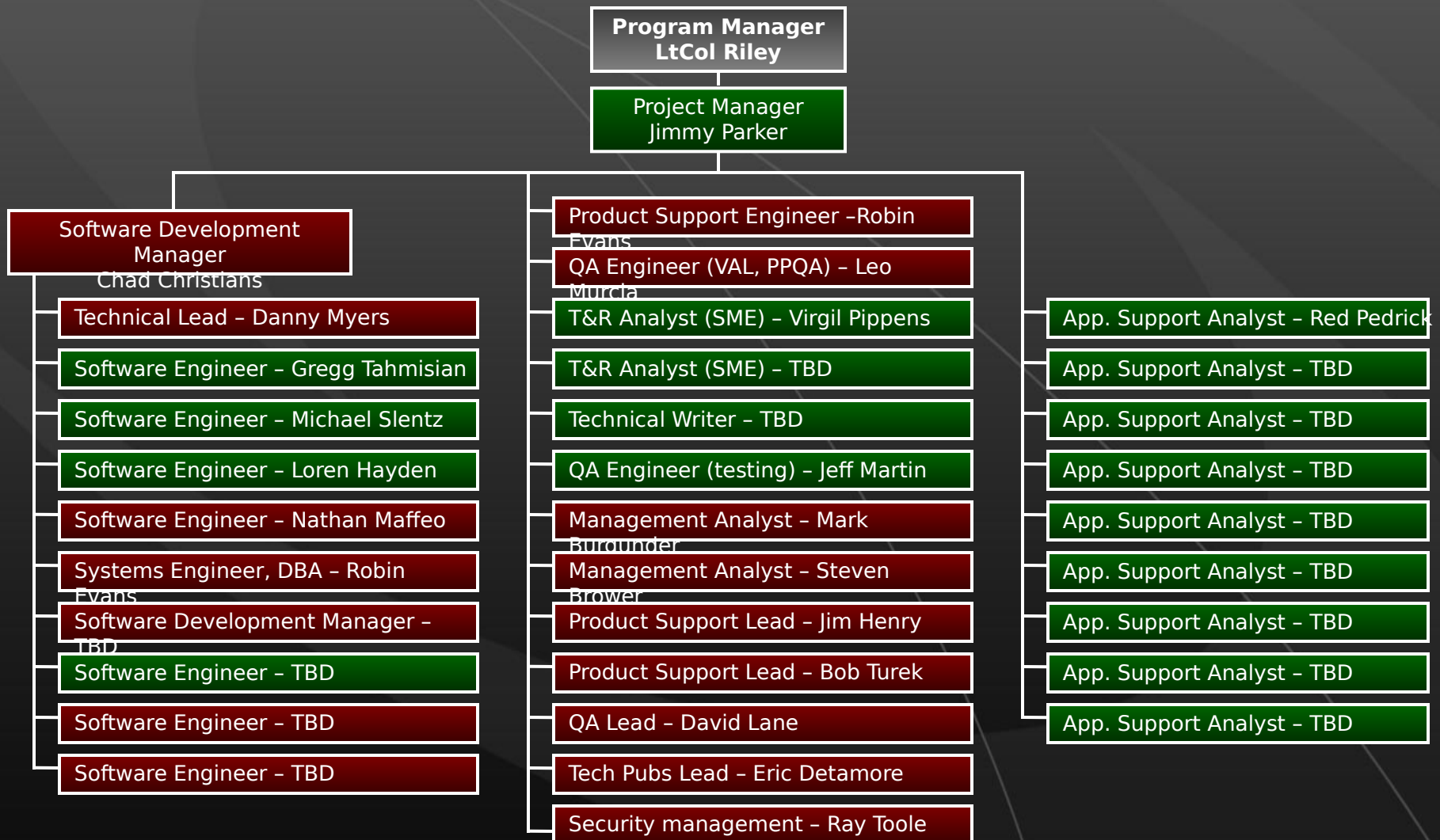
Automated Training Management for Marine Aviation

Introductions

- LtCol P.A. Riley
 - M-SHARP Program Manager
 - Standards Section Head, ATB
- Mr. Jimmy Parker
 - M-SHARP Project Manager
 - Background (HMLA, SARA)
- Mr Virgil Pippens
 - M-SHARP MACCS Requirements Analyst
 - Background (ATC) / USMC Ret
- InnovaSystems International
 - HQ at NAS North Island, CA
 - M-SHARP office at ATB, Quantico
 - Navy SHARP



M-SHARP Team



M-SHARP...

What is it?

***Do I have to do
it?***

What does it do?

***What's it look
like?***

***When will I see
it?***

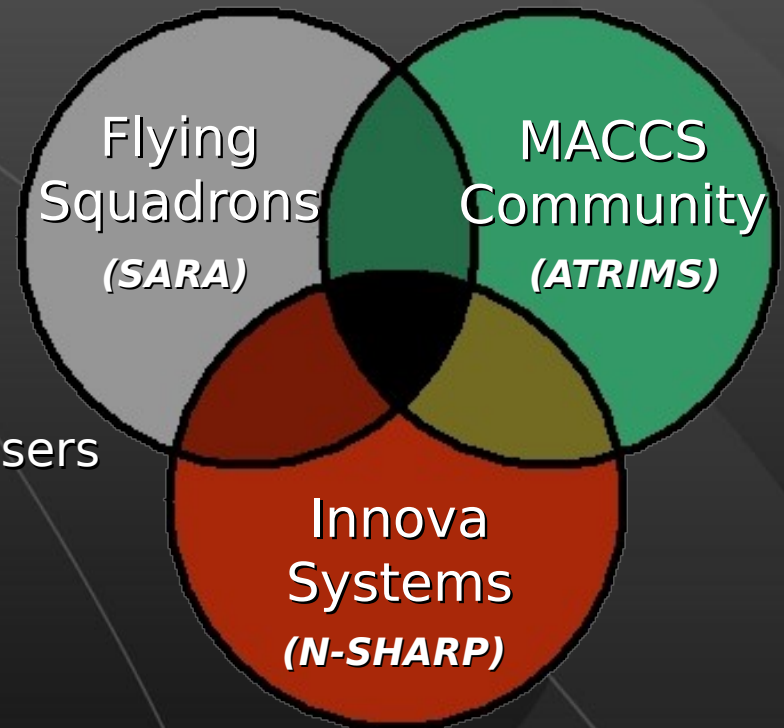
Q&A

What is M-SHARP?

- Marine Corps Sierra Hotel Aviation Readiness Program
 - Automated training management
- Government-owned, maintained by Innova
- Web-based, but still supports deployed ops
 - All you need is Internet Explorer
 - Can operate “standalone” without internet connectivity
 - Zero footprint on PC (NMCI / updates)
- User friendly, Outlook-style interface

“Ground Floor” Opportunity

- Corporate knowledge
 - ATRIMS history
 - SARA overhaul
 - Navy SHARP
 - Deployed, shipboard ops
 - 6,474,539 hits from 1,180 users in July 05
- Custom-built software
 - Built from the ground up
 - For all T&Rs in Marine Aviation



Basic Organization of T&Rs within Marine Aviation

USMC
LEVEL

WING
LEVEL

GROUP
LEVEL

SQUADRON
LEVEL

MARFOR

MEF

COMCAB

MAW

MCAS

H&HS

MAG

MWSG

MACG

C-9 C-20 F-5 UC-12 UC-35 HH-1 HH-46

**Tactical
Flying
Squadrons**

MALS

MWSS

MTACS

MACS

MWCS

MASS

LAAD

VMU

AES

AOS

METOC

TACC

TAOC

MATC

DASC

LAAD

UAV

VMGR
(KC-130F/R/T)

VMGR
(KC-130J)

VMFA
(F/A-18A/C)

VMFA(AW)
(F/A-18D)

VMA
(AV-8B)

VMAQ
(EA-6B)

VMM
(MV-22)

HMM
(CH-46E)

HMH
(CH-53D/E)

HMLA
(AH-1W &
UH-1N)

USMC “Gotta Haves”

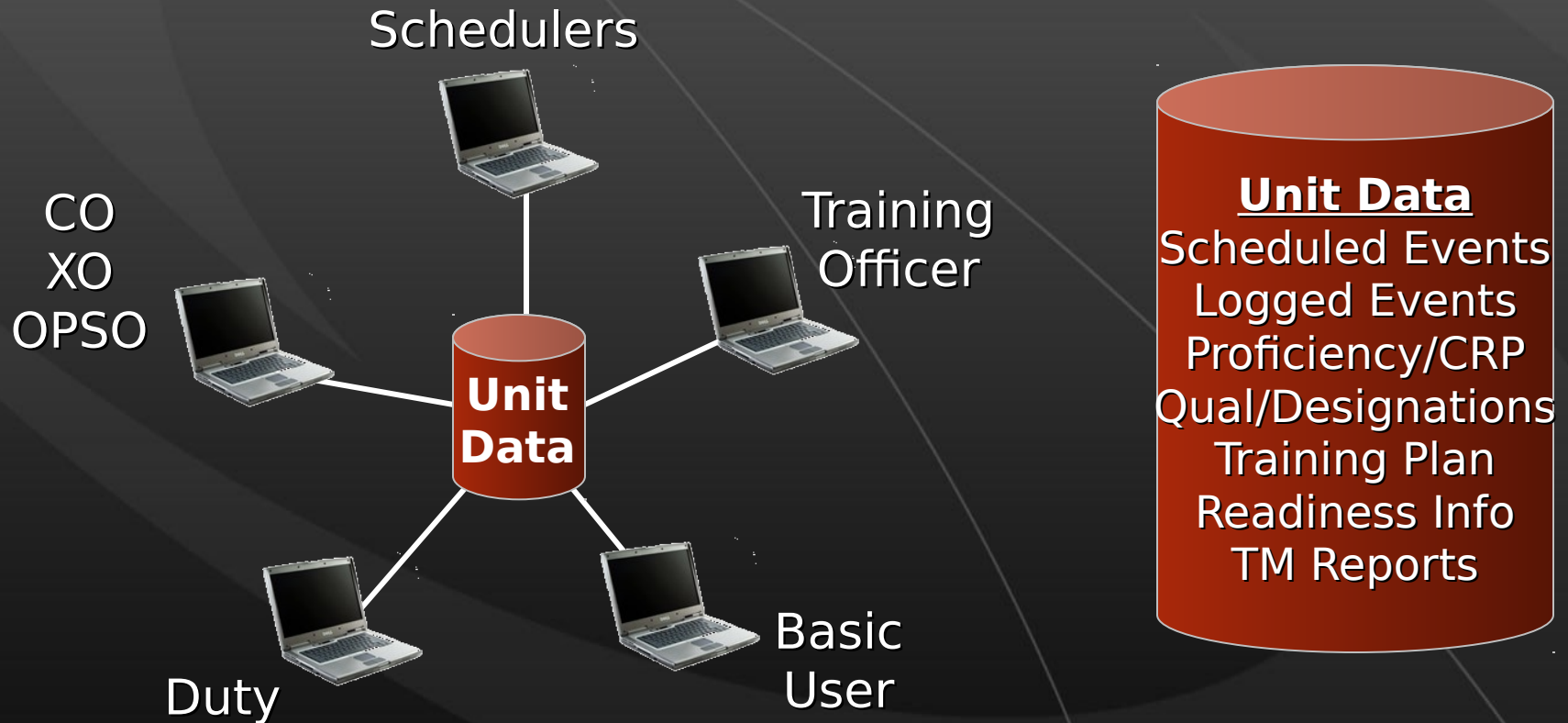
- Compliance with Marine & Naval Aviation policy
- Multi-user / networked environment
- Centralized management
- Scheduler (flight, ground, duty) w/ imbedded ORM
- Standardized & custom reports
- Aviation data warehouse
 - Data analysis / trend identification
 - Readiness status (T-level)
 - CCRM
- On-site support & training

Policy Compliance

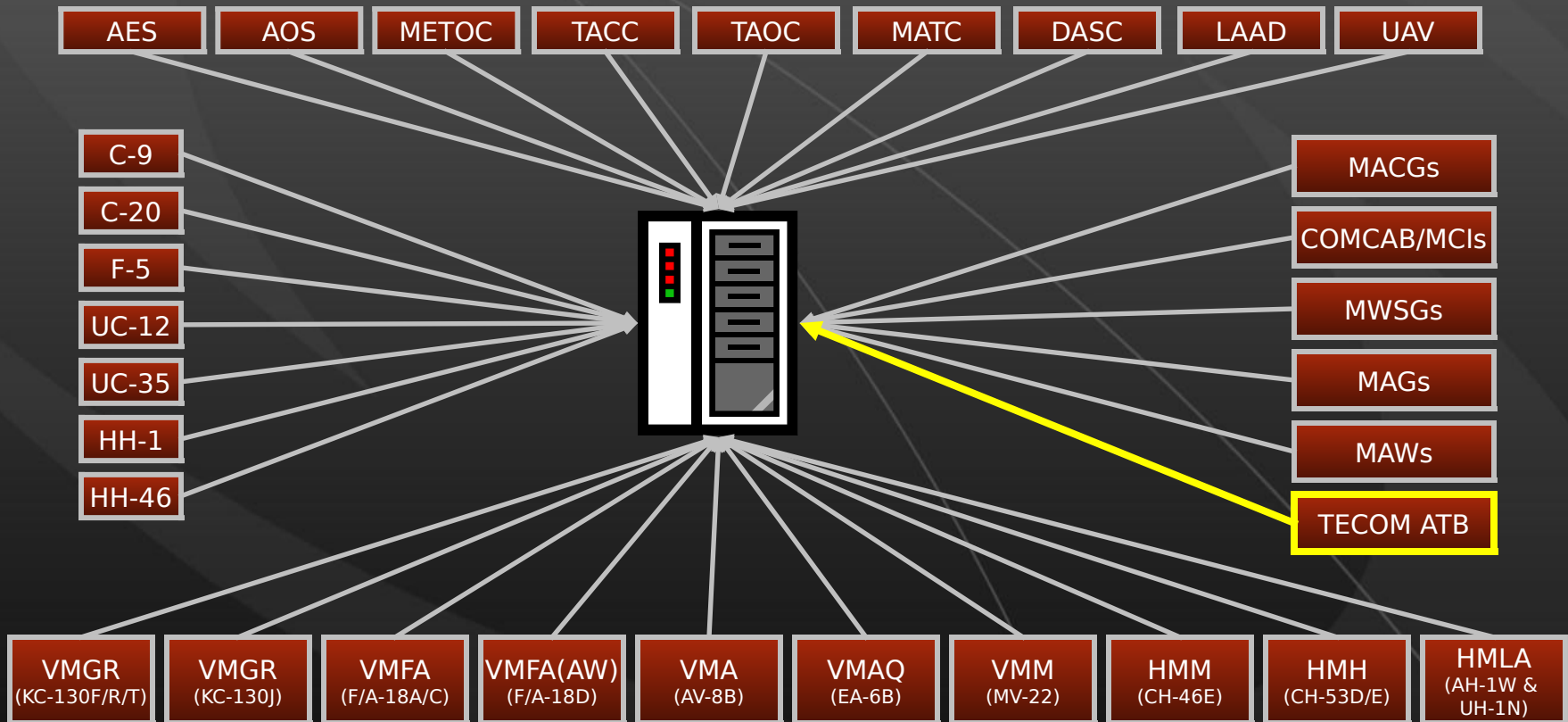
- USMC policies
 - MCO P3500.14H→I – T&R Program Manual
 - MCO P3500.XX – Specific T&R Manuals
 - MCO P3125.1A CCRM / FHP Management
 - MCO P3000.13D→E USMC SORTS Manual
- Naval Aviation policies
 - NAVAIR 80T
 - OPNAVINST 3710.7T
- DoD policies
 - DoD Directive 7730.65 DRRS
- Command policies
 - Squadron/Group/Wing Ops SOPs
 - Facility manuals
 - Local policy

T&R Codes
Chaining
Refreshers
Prerequisites
Currency
Proficiency
Qualifications
Designations
CRP→CSP
T-Level
CCRM

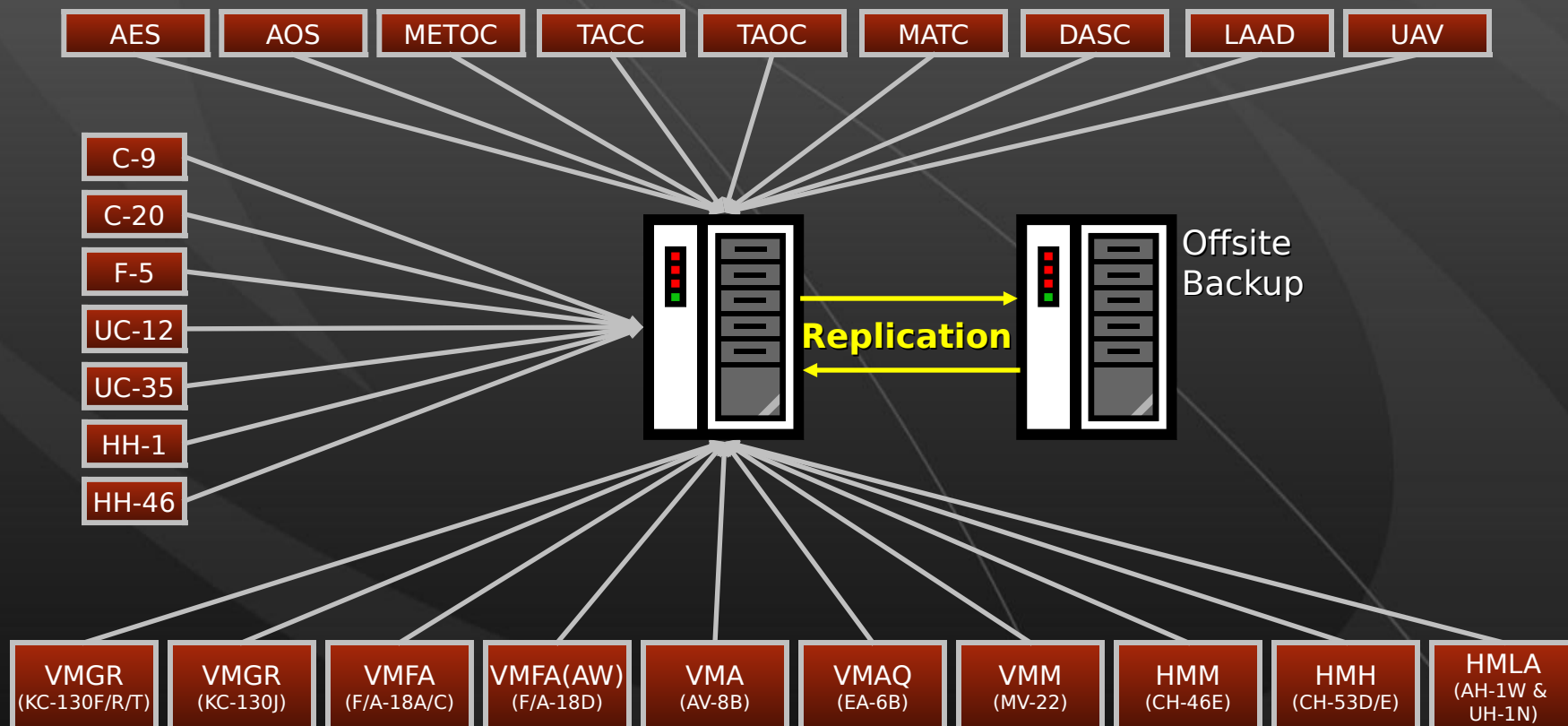
Multi-User Environment



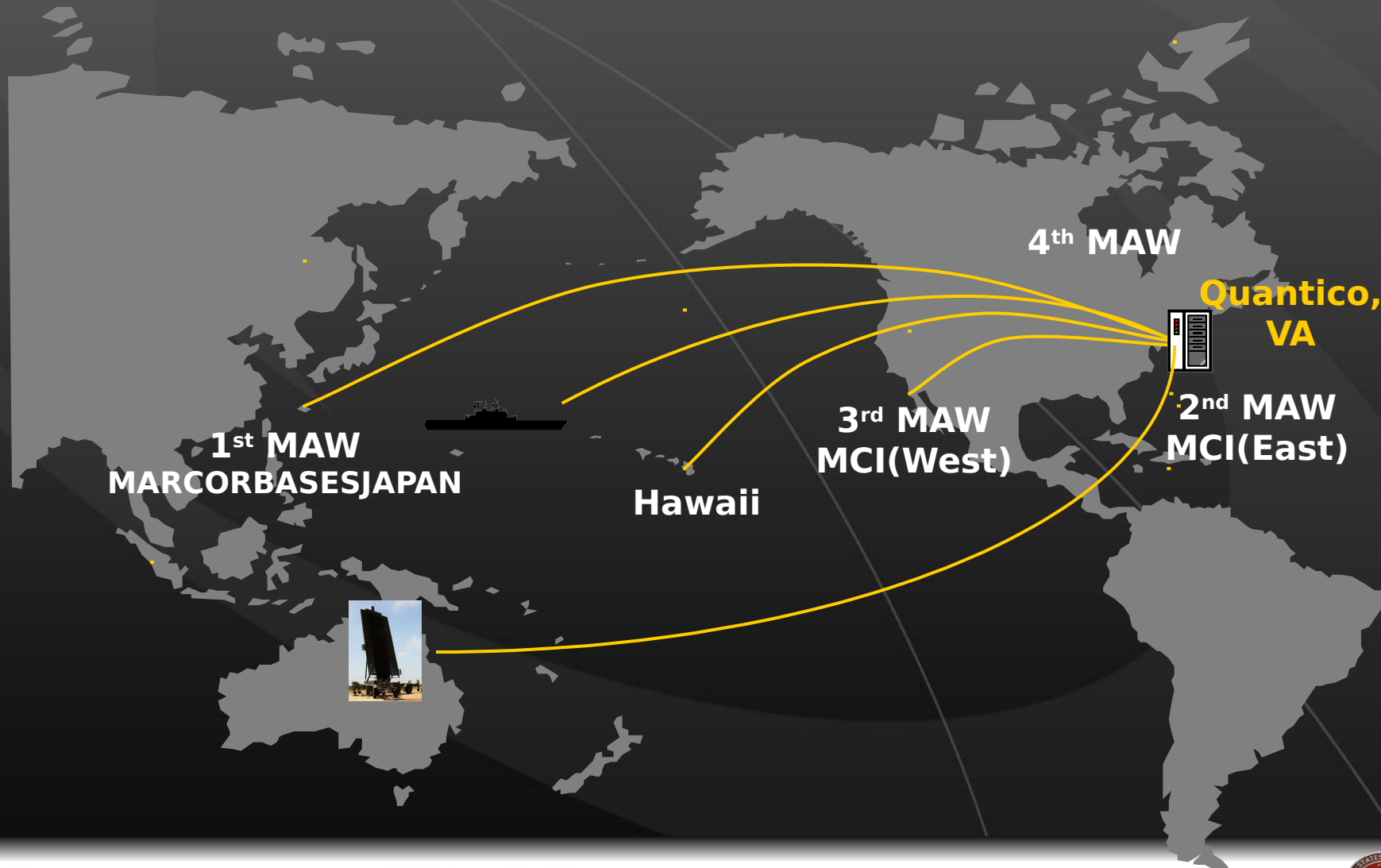
Multi-Unit Environment



Data Redundancy

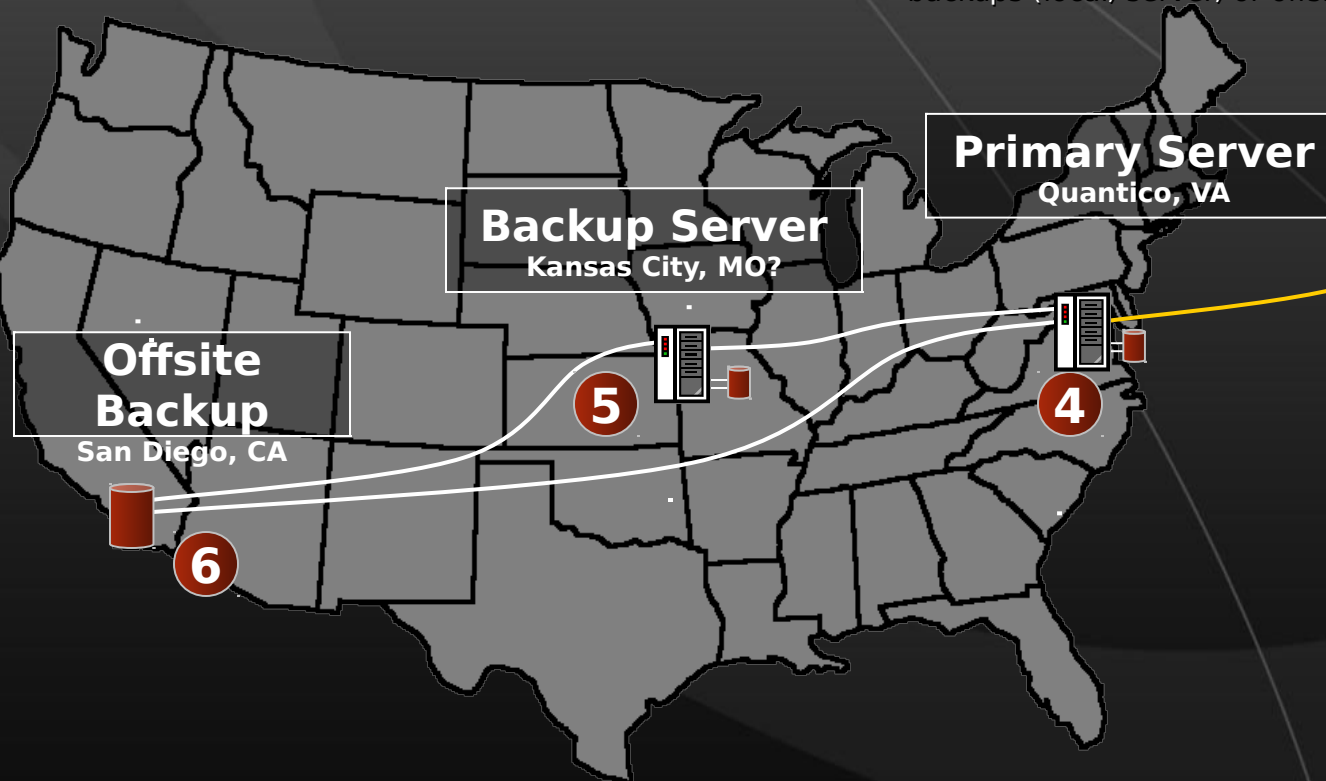
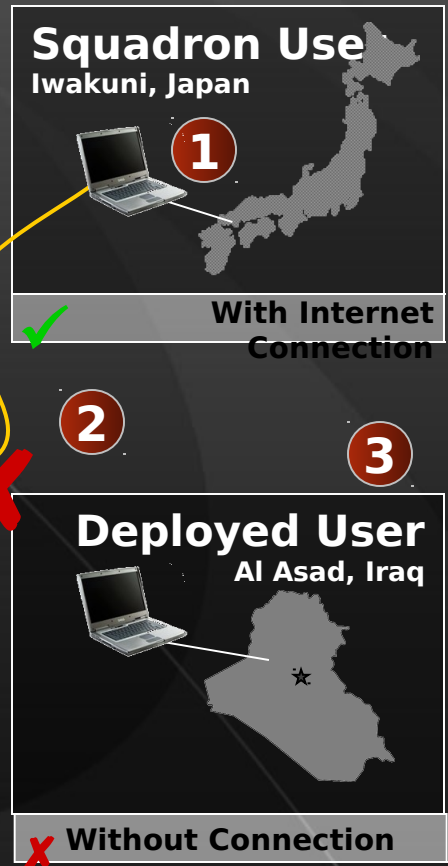


M-SHARP Connectivity



Risk Mitigation & Disaster Recovery

1. Local hard drive/computer failure
 - Log-on with another computer
2. Lose internet connection
 - Continue offline w/ "Off-Line" Version
3. Deployed Operations
 - "xDeployAdmin" (M-SHARP Deployable)
4. Primary Server hard disc failure
 - Redundant Storage
5. Complete Primary Server failure
 - Auto-redirected to backup server
6. Data Recovery
 - Restore from one of several backups (local, server, or offsite)



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it?***

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***What's it look
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***When will I see
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Q&A

Do I Have to Do it?

- Flying squadrons
 - M-SHARP approved by DC/AVN; in next AVPLAN
 - MCO P3500.14 will mandate usage
 - AIRS Checklist update (CGIP/UIP/CIP)
- MACG
 - Executive steering committee decision to use M-SHARP
- MWSG
 - Currently TBD
- DOD initiatives
 - DRRS → NAVRIIP → ERIIP → ESORTS

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Q&A

Training Management

- Scheduling
 - Flight/ground/duty
 - Each day/week/month/year
 - Personnel availability
 - TEEP, pop-up tasks
 - FRAGS, LLL periods, etc
 - ORM
 - Logging
 - Reports
 - Currency/proficiency, quals
 - Training jackets, logbooks
 - Readiness
 - Individual, unit (SORTS)
- ✓ Optimal Training Plan
 - ✓ No Scheduling Conflicts
 - ✓ Meets Rules & Regs
 - ✓ Easy to use
 - ✓ Timely & Responsive

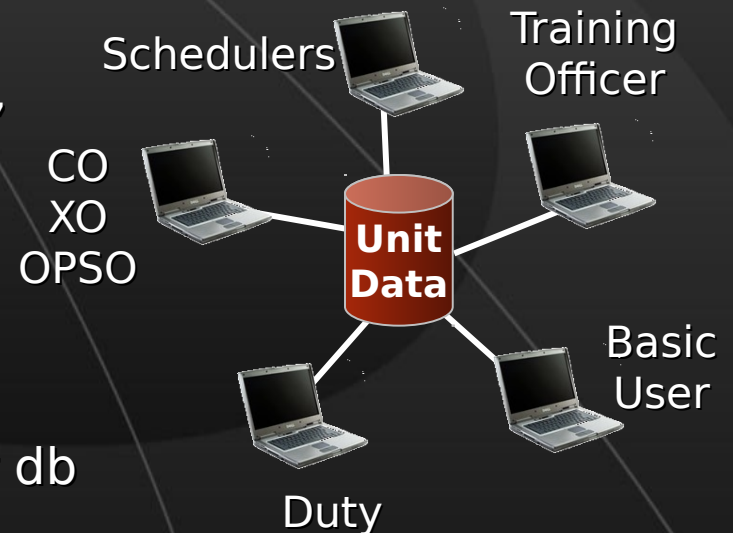
Automated Training Management

- Training management ain't easy
 - It's complex
 - Few people know all the rules
 - Your tools are inadequate
 - Doing it manually is almost impossible
 - Excel, whiteboard, stubby pencil, etc



You Can Take It With You

- Pre-deployment
 - Squadron ISC/S-6 submits deployment info to NMCI via CTR
 - ISC/S-6 obtains xDeployAdmin rights from NMCI Help Desk
 - Load M-SHARP Portable and copy of your data onto laptop
 - Unplug & go train/fight
- On deployment
 - Can set up M-SHARP LAN
 - “On-site” support means “on-site”
- Post-deployment
 - Backup squadron (det) data
 - Uninstall M-SHARP Portable
 - Plug in & reboot
 - Upload/sync det data with master db



Imbedded ORM

Hazard ID by Policy Enforcement

- MCO P3500.14 – Pgm Manual
- MCO P3500.XX – T&R Manual
- NAVAIR 80T
- OPNAVINST 3710.7T
- Sqdn/Grp/Wing Ops SOPs
- Facility manuals
- Local policy



Automatic Checks for

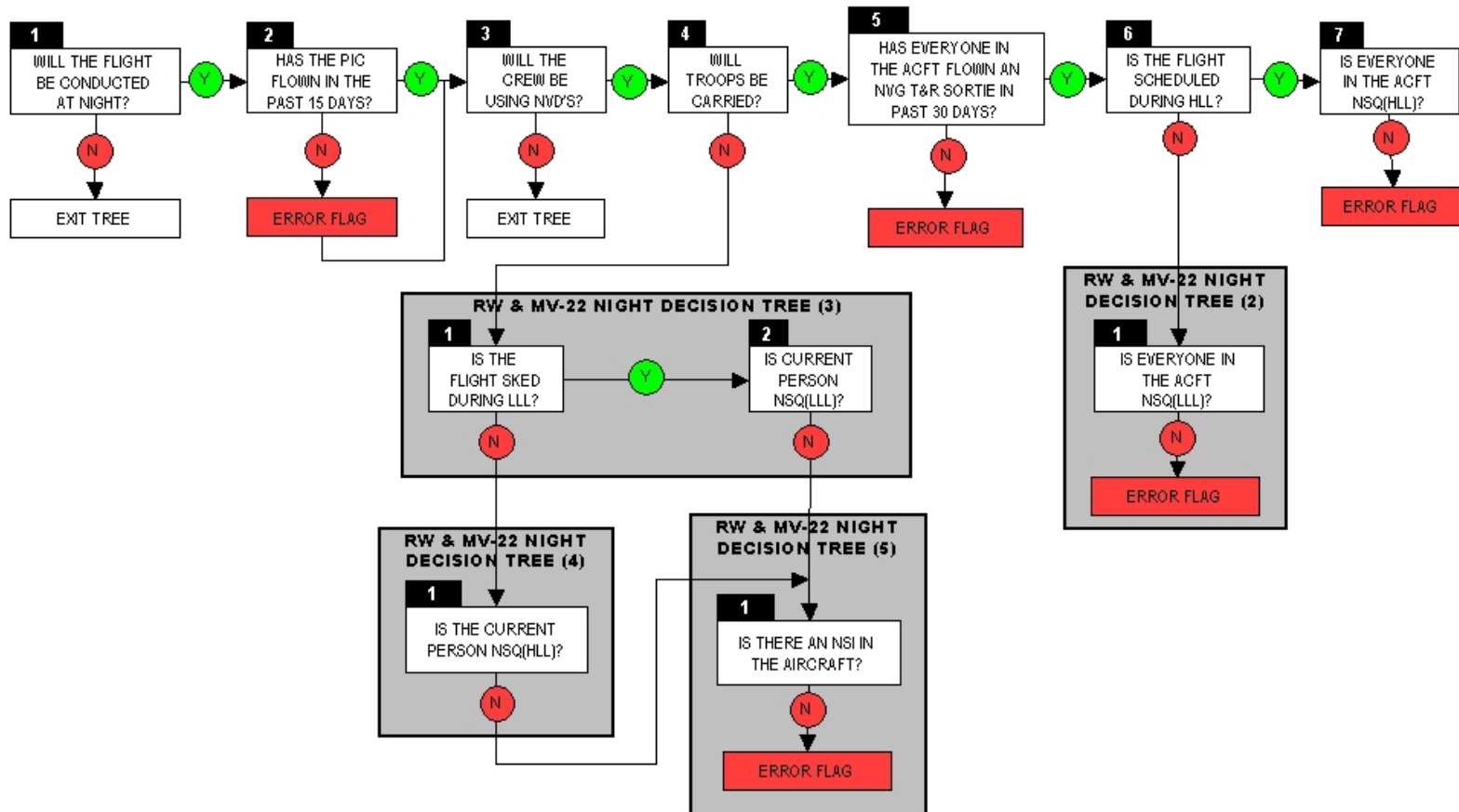
- Availability
 - Snivels
 - Crew day/rest
- Quals/designations
- Proficiency
- Prerequisites
- Standard Decision Trees
- Custom Decision Trees

ORM automation field tested by flying squadrons with SARA
Case Study: 22 MEU in Afghanistan

Flowcharts

RW & MV-22 NIGHT DECISION TREE

This tree is run for all night and night-optional events in all helicopter and tilt-rotor syllabi.



On-Site Support & Training

- Technical support reps
 - 2 East coast
 - 2 West coast
 - 2 Overseas
- Initial fielding
 - MTT to field units one-by-one
 - 5-day training and implementation course
 - Designed by ATB
- On-site services
 - Ongoing training & implementation assist
 - Custom reports
 - Source for requesting enhancements
 - Day-to-day troubleshooting & assist
 - Deploying

Streamlined Data Flow

- Pre-built data
 - T&R, several lists, risk model → managed by higher
 - Lists like aircraft types, squadron names/callsigns, ICAOs, airspaces, ranges
- Data import tools
 - SARA database, ATRIMS database, Excel
- Personnel transfers
 - One database
 - PCS/PCA/TAD/FAP
 - Transfer of one or many
 - To/from squadron, air station, MEU, etc.
 - Preview inbound personnel

Flexible Reports

- Group/wing pull vs. squadron push
- Unit-level reports
 - Readiness (T) level, hour/sortie totals, range usage, etc.
- Personnel-level reports
 - Quals, designations, proficiency, CRP/CSP, etc.
- Ad hoc (custom) reports
- “My Reports” area
- All exportable to Word, Excel, or PDF

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Q&A

Training Codes

FLIGHT TRAINING CODES:			
SHARP 5.0 <input type="checkbox"/> Profiles <input checked="" type="checkbox"/> E.O.M. Transmission <input type="checkbox"/> Wing Based Properties <input type="checkbox"/> TMS List <input type="checkbox"/> Airframes Configurati <input type="checkbox"/> CrewStations <input type="checkbox"/> T&R <input type="checkbox"/> POI List <input checked="" type="checkbox"/> Training Codes <input type="checkbox"/> Qualifications <input type="checkbox"/> Designations <input type="checkbox"/> Weapons <input type="checkbox"/> Prerequisites <input type="checkbox"/> Chaining <input checked="" type="checkbox"/> Missions <input checked="" type="checkbox"/> Flight Logging <input checked="" type="checkbox"/> Squadron Based Property	Stage/Training Code		
	Crewstation/TMS	Stage	Training Code
	Pilot / CH-53E	SFAM	100
	Description		
	Introduce normal cockpit procedures, start procedu		
	Conditions/Hours/Interval/Expiration		
	<input type="checkbox"/> Aircraft <input checked="" type="checkbox"/> Simulator S/A A/S N/A Hours: 1 Refly Interval: 90 Days <input type="checkbox"/> Expires EOM		
	CRP/Aircraft/Night/POI		
CRP	# of A/C	POI	
0.2 %	1	<input checked="" type="checkbox"/> Conversion <input type="checkbox"/> Evaluation <input checked="" type="checkbox"/> Refresher	
<input type="checkbox"/> Flown at Night <input type="checkbox"/> Night Systems Required			
Notes			
Pre-Requisite Notes		Chaining Notes	
None			
Syllabus Support	Notes		
<div style="text-align: right;"> <input type="button" value="Ok"/> <input type="button" value="Cancel"/> </div>			

Flight	Media Preference
False	SA
False	S
False	S
False	S
False	S
False	S
False	S
False	S
False	S
True	A
True	A
True	A
True	A
True	A
True	A
True	A
True	A
True	A
True	A

UNCLASS User: W Build 61

Chaining

SHARP 5.0

MAIN | SCHEDULER | REPORTS | **SETUP** | LOG OFF

☐ Profiles

☐ E.O.M. Transmission

☐ Wing Based Properties

☐ TMS List

☐ Airframes Configuration

☐ CrewStations

☐ T&R

☐ POI List

☐ Training Codes

☐ Qualifications

☐ Designations

☐ Weapons

☐ Prerequisites

☒ Chaining

☒ Missions

☒ Flight Logging

☒ Squadron Based Properties

CHAINED T&R CODES

Training Codes

Pilot / CH-53E

233

240

241

242

243

250

260

270

271

272

273

280

290

291

320

343

350

360

361

362

370

Unassigned Chains

100

101

102

103

104

105

106

107

110

111

112

113

114

115

116

117

118

119

120

121

122

Add/Remove Assigned Chains

221

222

>>

<<

UNCLASS | User: WindAdmin | Squadron: USMC | Profile: *No Profile | Report | Build 61

Qualifications

SHARP 5.0 **MAIN** SCHEDULER REPORTS SETUP LOG OFF

[Scheduled Flights] [Logged Flights] [Day Scheduler] **[Qualifications]** [Designations]

TMS: CH-53E CREWSTATION: *ALL CREWSTATIONS DET: *ALL DETS STATUS: *ALL STATUS PERSONNEL: *ALL PERSONNEL GO

☐ Add Quals ☒ Report>> Date Expired: Days Until Expiration: >= 60 59 - 30 29 - 0 Expired

Name ^	Station	TMS	CRM Flight	CRM Ground	EGRESS	EJECT	Fire Fighting	Flt Physical	HARP	IGS	Water Surv (I)	Water Surv (I)	Water Surv (I)
Christians, C	Crew Chie	CH-53E	7/31/2004	-	-	-	-	-	-	-	-	-	7/31/2002
Doe, J	Pilot	CH-53E	-	-	-	-	-	-	-	-	-	-	-
Vernons, L	Crew Chie	CH-53E	-	-	-	2/29/2004	6/30/2004	-	-	-	-	-	-

UNCLASS User: WingAdmin Squadron: USMC

modal -- Web Page Dialog

ADD QUALIFICATIONS

TMS: CH-53E

Personnel: * All Status

Christians, C
Doe, J
Vernons, L

Qualifications

CRM Flight
CRM Ground
EGRESS
EJECT
Fire Fighting
Flt Physical
HARP
IGS
Water Surv (R1)
Water Surv (R2)
Water Surv (R3)

Date Received

07/14/2003

Delete OK Cancel

Flight Scheduler

	Base Date	Brief	Launch	Land	Close	Pilot	CC P	TnR P
	Event	Wing	Airframe Type	Side	TFT	Crew Chief	CC CC	TnR CC
	Sortie Type					Gunner	CC Gun	TnR Gun
<input type="checkbox"/> 1-A	07/15/200	0000	0000	0000	0000	TBD		135,136,138
	1	A	CH-53E		0.0	TBD		331,340
	FLIGHT					TBD		
<input type="checkbox"/> 1-B	07/15/200	0000	0000	0000	0000	TBD		
	1	B	CH-53E	TBD	0.0	TBD		
	FLIGHT					TBD		
<input type="checkbox"/> 1-C	07/15/200	0000	0000	0000	0000	TBD		
	1	C	CH-53E	TBD	0.0	TBD		
	FLIGHT					TBD		
<input type="checkbox"/> 2-A	07/15/200	0000	0000	0000	0000	TBD		
	2	A	CH-53E	TBD	0.0	TBD		
	FLIGHT					TBD		
<input type="checkbox"/> 2-B	07/15/200	0000	0000	0000	0000	TBD		
	2	B	CH-53E	TBD	0.0	TBD		
	FLIGHT					TBD		

UNCLASS User: WingAdmin Squadron: USMC Profile: *No Profile Report Bug Build 61

-- Web Page Dialog

SELECT TRAINING EVENTS

Syllabus:

- ☐ 100, Crew Chief / CH-53E
- ☐ 101, Pilot / CH-53E
- ☐ 101, Pilot / F/A-18
- ☐ 102, Introduce engine malfunc...
- ☐ 103, Introduce running landing...
- ☐ 104, Introduce gearbox malfunc...
- ☐ 105, Introduce communication s...
- ☐ 106, Conduct Progress Check. ...
- ☐ 107, Introduce NS adaptation....
- ☐ 110, Introduce start, normal g...
- ☐ 111, Introduce precision hover...
- ☐ 112, Introduce engine failure(...
- ☐ 113, Introduce no hover landin...

Ok Cancel

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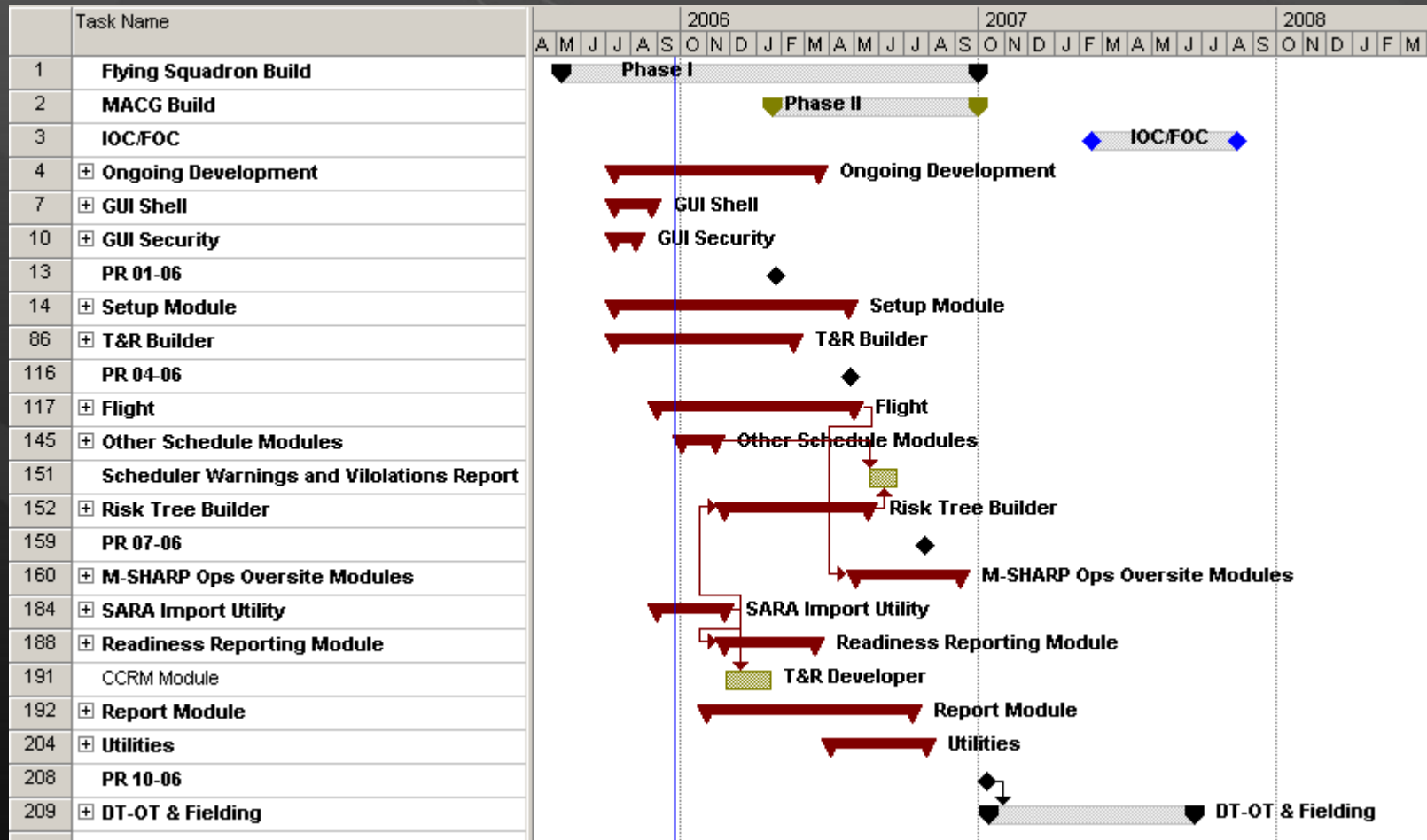
Q&A

Phased Approach

- Depends...can't build without requirements
- This is a goal, based on solid MACCS requirements



Master Schedule



Questions?

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